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The effects of empathy, perceived injustice and group identity on altruistic preferences:
Towards compensation or punishment

Abstract

Previous research supports that both empathic concern and perspective-taking are predictors of altruistic behaviours in dictator games. Less is known, however, about how the identity of the victim and the perpetrator and the strength of ingroup identity of the observer in such games impacts upon preferences for altruistic compensation and punishment. Focusing on gender identity, the present research aimed to examine the effects of empathy, perceived injustice, and ingroup identity strength on preferences for altruistic compensation and punishment. Female adult participants ($n = 116$) were recruited through an online survey conducted in the United Kingdom. Using a dictator-style game, participants were randomly assigned to observe either a male or female distributing resources to a female victim, after which they were asked to rate their feelings of injustice and then completed a series of measures including empathic concern, perspective-taking and strength of gender identity. Results demonstrate that empathic concern and perspective-taking predicted third-party altruistic preferences but there was no effect of experimental condition (perpetrator identity). Results have implications for promoting perspective taking-focused empathy intervention in occasions where distributive inequality or intergroup bias frequently occurs. These are also the insight to female's awareness of gender equality and a novel enforce of norm violations.

Keywords: empathic concern, perspective taking, altruism, third-party compensation, punishment, ingroup favouritism, perceived injustice

The effects of empathy, perceived injustice and group identity on altruistic preferences for compensation and punishment

Empathy is thought to be a developmental social skill that helps individuals to understand the emotional or mental states of others and is associated with moral development and altruistic behaviours (Eisenberg & Miller, 1987; Hoffman, 2000; Van der Graaff et al., 2014). Previous research has established two sub-components of empathy; empathetic concern (also known as trait empathy) and perspective-taking (also known as cognitive empathy) and findings demonstrate that both of these drive costly altruism (FeldmanHall et al., 2014). That is; the tendency to help, comfort and share self-interest with other people. The core features of altruism involve self-sacrificing voluntarily and intentionally with the primary goal of helping another individual (Eisenberg & Miller, 1987; Baston, 1998; Feigin, Owens & Goodyear-Smith, 2014).

The empathy-altruism hypothesis proposes that true altruists are motivated to help without the expectation of any forms of internal or external gain (Batson, 1991) and that this motivation to help is evoked by empathic emotions (e.g., sympathy and compassion) towards the person in need and moral concerns about that person's situation (e.g., injustice). Whilst most studies focus on understanding altruism as helping and sharing behaviours that compensate the victim, there is also evidence that observers are motivated to punish the perpetrator when they perceive injustice (Fehr & Gächter, 2002; Bowle & Gintis, 2004; Henrich et al., 2006). It is therefore vital to consider how individuals choose to engage in different types of altruistic actions. It is posited here that altruistic actions in real world settings are influenced by the identities of the perpetrator, victim and observer. Indeed, evidence shows that individuals are more likely to empathise with ingroup members than outgroup members (Nesdale, Griffith, Durkin & Maass, 2005; Čehajić, Brown & González, 2009) and more likely to perceive ingroup than outgroup injustices (Lalonde & Sliverman, 1994; Tyler & Blader, 2003). Whilst the players in dictator

style games are often anonymous, as a way to capture mechanisms and understand psychological processes, it is suggested here that through experimentally manipulating the identity of the game players, it may be possible to examine identity effects on altruistic behaviours. The present study, therefore, has two key aims. First, it aims to replicate prominent findings that individuals with high levels of empathic concern, perspective taking and perceived injustice tend to compensate victims while those with low levels of empathic concern, perspective taking and perceived injustice tend to punish perpetrators (Fehr & Gächter, 2002; Leliveld et al., 2012; Will et al., 2013). Second, it aims to extend this body of literature by examining whether the identity of the perpetrator and the identity strength of the observer affects altruistic behaviours.

The empathy-altruism link

There is overwhelming evidence that trait empathy is the strongest predictor of altruism (Edele et al., 2012; Leliveld et al., 2012; Welp & Brown, 2013; Neff & Pommier, 2013; Will et al., 2013; FeldmanHall et al., 2014; Weng et al., 2015; Harrington, Bramham & O'Connell, 2015; Lim & DeSteno, 2016). The effect of trait perspective-taking on altruism, however, is inconsistent (Edele et al., 2012; Decety, Chen, Harenski & Kiehl, 2013; Will et al., 2013). Some research suggests that individuals who score higher on empathic concern are more likely to choose to compensate the victim than punish the perpetrator after perceiving unfair interactions (Leliveld et al., 2012; Will et al., 2013). Further, there is evidence to show that the extent to which individuals are willing to sacrifice their own resources to help (the victim) is associated with empathic concern (Will et al., 2013; Edele et al., 2013). It is not clear, however, whether perspective-taking similarly affects an individual's willingness to punish or compensate in the same way that has been observed with empathic concern. Considering that perspective-taking is facilitated by a sense of social attachment and fosters empathic concern

(Baston, 1991; Hoffman, 1994; Baston et al., 1997; Cialdini et al., 1997; Corcoran & Mallinckrodt, 2000; Tusche, Bockler, Kanske, Trautwein & Singer, 2016), it is possible that adopting the perspective of a victim who is a relative or shares similar characteristics (e.g., ingroup membership) increases the extent to which an individual would compensate the victim or decreases the extent to which an individual would punish the perpetrator. This is an assertion we test in the present research.

One of the most reliable and common ways of measuring altruistic behaviours is through economic games that allow for cause and effect to be determined (Will et al., 2013). An example of an economic game is the dictator game with third-party compensation and, in some cases, punishment (Leliveld et al., 2012). The dictator game is a hypothetical economic game with many variations. In some, participants are offered a chance to either compensate the victim, punish the perpetrator, or keep the money for themselves after observing one player dividing a certain amount of money (e.g. 90 vs. 10) between another player and themselves (Pedersen, Kurzban & McCullough, 2013; Weng et al., 2015; Zhao, Ferguson & Smillie, 2016). This experimental design rules out confounding motives (e.g., self-interest, social desirability) whilst addressing the intention of caring for and benefiting others (Edele et al., 2012). Therefore, any amount of money the third-party donates to compensate the victim or punish the perpetrator is argued to measure altruistic tendencies. Given that individuals differ in subjective feelings of the ownership of the money (coined as ‘entitlement’ in Wu, Hu, van Dijk, Leliveld & Zhou, 2012), some participants in such games might not perceive injustice because breaking equality is justified (i.e. a task assigned by the experimenter). We, therefore, argue that in addition to examining empathy it is essential to consider the extent to which an individual perceives that injustice has occurred when assessing altruistic behaviours.

Perceived injustice

Tyler and colleagues (1997; 2003) suggest that justice judgments shape our thoughts, feelings, and actions, consolidating an individual's evaluation of social situations (Tyler et al., 1997; van den Bos & Lind, 2002). It could be argued that negative reactions to injustice will elicit emotional responses that evoke behaviours such as compensating the victim (i.e. sympathetic, compassion feelings) or punishing the perpetrator (i.e. aversive or heroic feelings) (McCall, Steinbeis, Ricard & Singer, 2014). Further, research demonstrates that people tend to sacrifice themselves more to help another person who is either unfairly or immorally treated (Rupp & Bell, 2010; Lotz et al., 2011; O'Reilly, Aquino & Skarlicki, 2016). When an unfair offer is made in some dictator style games, participants can choose to either reject the offer resulting in no gain for either participant or accept the offer at a personal loss. In such situations, findings show that participants' tendency to reject the offer is independent of the fairness of the offer (i.e. 10/90 vs. 40/50) (Henrich et al., 2006; Bowles & Gintis, 2011; Brañas-Garza, Espín, Exadaktylos & Herrmann, 2014). There is also evidence to suggest that the focus of an individual during these games is on fairness violation, rather than personal outcomes. For instance, in his study which aimed to understand public cooperation with the police, Bradford (2014) revealed that it is the cognitive process of evaluating the authority and fairness of distribution of resources and not the risk that crime cases might increase in the vicinity and then threaten one's property that predicts cooperative behaviours to the police. Whilst perceptions of fairness are not always associated with self-reported altruism measures, it has been reported that they influence participants' subsequent reactions to unequal resource distribution in the real world (Wu, Zhou, van Dijk, Leliveld & Zhou, 2011; Qu, Wang & Huang, 2013). The above research supports that what participants really care about is how decision-making influences the unfair distributive outcome (Cremer & Sedikides, 2005; Bradford, 2014; Michel & Hargis, 2016). This propensity towards fairness arguably links

closely to empathetic concern. It seems reasonable, therefore, to anticipate that perceptions of injustice, similar to empathy, would predict altruistic behaviours. Yet, to our knowledge, this is the first study examining the moderating role of perceived injustice on altruistic preferences for both compensation and punishment. It is argued, however, the extent to which perceptions of injustice are associated with altruistic behaviours may also depend upon the identity of the victim and the perpetrator.

Group Identity

Previous research demonstrates that group membership plays an important role in perceptions of injustice or unfairness. Specifically, there is evidence that injustice feelings are less salient when distributive inequality is created by an individual who fits one's own group identification, indicating that people might be less motivated to altruistically punish someone from the same group (Wu, Hu, van Dijk, Leliveld & Zhou, 2012; Qu, Wang & Huang, 2013; Wang et al., 2017). This is an important finding because an individual's sense of identity can influence how they feel both about themselves and about others (Tajfel & Turner, 1979) and may lead to ingroup favouritism and (not always) outgroup derogation (Brewer, 2001) thereby influencing intergroup behaviours. There is evidence that group identity plays a crucial role in monetary distribution. For example, Guala and Filippin (2016) found that people altruistically allocated more money towards an ingroup member victim and were more likely to punish an outgroup perpetrator (Guala, & Filippin, 2016). This finding is further supported by previous research which has observed that ingroup members who violate social norms will be less harshly punished than outgroup members due to ingroup favouritism (DeSmet et al., 2014; McAuliffe & Dunham, 2015; Guo, Xu, Wu & Hu, 2016; Guala, & Filippin, 2016; Wang et al., 2017). What remains less known, however, is whether the identity of the perpetrator (as an ingroup or outgroup member) moderates or is moderated by other factors (e.g. empathy, perceived injustice) in the dictator game and influences altruistic behaviour choices. And,

whether the observer's identity and identity strength influences these relationships. Given the importance of group identity in real world settings and conflicts, it could be argued that the identity of participants in such games may play an important role in associated behaviours. And, to our knowledge, few studies have examined the moderating effect of group identity on altruistic preferences for third-party compensation or punishment in the dictator game.

The Present Research

The present research has two key aims. First, it aims to replicate previous established findings that people with high levels of empathic concern and perspective taking tend to compensate victims while those with low levels of empathic concern, and perspective taking tend to punish perpetrators. Second, it aims to extend this literature by examining whether injustice perceptions, the identity of the perpetrator and the identity strength of the observer affects altruistic behaviours. Here, we consider gender identity for a number of reasons. First, gender is a salient identity that is associated with prejudice and discrimination internationally (Schnittker, Freese & Powell, 2003). Second, it is argued that these intergroup biases contribute to more salient ingroup and outgroup gender identification particularly among females, who have been found to experience increased self-awareness of gender equality and pride (Burn, Aboud & Moyles, 2000; Schmader, 2002). Based on previous research we hypothesise that:

- (1) Participants with stronger ingroup identity will punish more if the perpetrator is an outgroup member (male) than if the perpetrator is an ingroup member (female).
- (2) Low empathic concern and perspective-taking will be associated with punishment and high empathic concern and perspective-taking will be associated with compensation;
- (3) High scores on perceived injustice will be associated with compensation while low scores on perceived injustice will be associated with punishment.

Method

Participants and Design

One hundred and sixteen participants ($M_{age} = 27.46$, $SD = 8.720$) were recruited via mailing lists and social media sites (based in the United Kingdom) and asked to complete an online survey (using Google Forms). The majority of participants ($n = 115$) identified themselves as female with one participant choosing “prefer not to say”. Of the total sample, 47% self-identified as being White or Caucasian, 46% as Asian or Asian British, and the remaining 7% a combination of mixed ethnicity and other. Most participants possessed a postgraduate degree ($n = 68$), with a smaller proportion possessing an undergraduate degree ($n = 38$) and graduating from secondary education ($n = 10$).

Participants were invited to take part in a study on female decision making. Once participants clicked on the survey link, they were directed to a detailed participant information sheet, which included information on the study aims, how long the study would take, how participants could withdraw as well as how data would be stored. Participants were then asked to give informed consent if they chose to participate in the survey. Throughout the survey, participants were reminded to be entitled to withdraw if they felt uncomfortable at any time. Once participants completed the survey, they were debriefed and provided with contact details of the researcher. No incentives were provided for participation in the study. Upon completion of the study, participants were fully debriefed and instructed to contact the researcher if they wished to follow-up the results of the study or if they had any concerns about the research.

Materials and Procedure

Following ethical approval from *Anonymous* University, the survey was entered into Google Forms and in addition to demographic measures (age, gender, education and ethnicity), participants completed a series of measures as detailed below.

The Dictator Game. Participants were randomly assigned to observe either an ingroup (female) or outgroup (male) dictator allocate resources to an ingroup (female) victim. The experiment was adapted from the dictator game (Fehr & Fischbacher, 2004; Leliveld et al., 2012). It included one dictator (Player A), one recipient (Player B) and one third-party observer (Player C). The game started with the dictator dividing a certain amount of money, for instance £100, between themselves (Player A) and Player B – for example, Player A might receive £90 and Player B might receive £10. After observing the money distribution (e.g., 90:10), participants were provided opportunities to spend a portion of their own endowed money (e.g., £50) to punish the perpetrator (Player A), compensate the victim (Player B), or keep the money for themselves (Player C)¹. Once a choice was made either to punish or compensate, the extent to which they were willing to intervene was measured. Observers were able to punish Player A at a 3:1 rate, e.g. they could spend £10 to dock Player A £30, all the way up to spending £50 to dock Player A £150. Similarly, observers were able to compensate Player B at the same ratio, every £10 they spent would increase Player B's money by £30, up to a maximum of £50 spent to increase Player B's money by £150. The amount of money they could spend was coded with intervals of 10 between 0 to 50, with 0 representing no money being spent (i.e. observers who chose to keep the money for themselves). Through the whole experiment, participants were led to believe that they were playing with two other humans, however players A and B were fictitious.

Empathy. Following completion of the dictator game, participants' level of empathic concern and perspective-taking was measured using the empathic concern ($\alpha = .84$) and perspective taking ($\alpha = .77$) subscales of the Interpersonal Reactivity Index (IRI) (Davis, 1983). Each subscale included 7 items, measured by a 5-point Likert scale ranging from 1 *doesn't*

¹This condition was not included in the analysis given that our focus was altruistic preferences towards compensation and punishment i.e. compensate v punish, rather than altruistic engagement

describe me well to *7 describes me very well*. Example items are as follows: Perspective-taking (e.g., I sometimes find it difficult to see things from the "other guy's" point of view), empathic concern (e.g., I often have tender, concerned feelings for people less fortunate than me).

Perceived Injustice. Perceived injustice was measured by a self-reported single item which concerns participants observed fairness about the dictator's behaviour (Pederson et al., 2012) as follows: "How fair do you think Player A's behaviour was towards the recipient (Player B)?" Participants were asked to rate the extent to which they feel unfair on a scale ranging from 1 (*not at all*) to 9 (*totally*).

Strength of ingroup identity. Strength of gender identity was measured using the single identity measure whereby participants were asked to rate the extent to which "I identify with being female." (Postmes, Haslam & Jans, 2013) on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Results

Data Analysis Plan

The data file was downloaded from Google Forms and input into SPSS. To test the hypotheses, multinomial logistic regression was used with participants' choices (punish v compensate) as the dependent variable. Experimental condition (male v female dictator) was entered as the independent variable and empathic concern, perceived injustice and identity strength were entered as covariates. Descriptive and correlational statistics are presented in Table 1 and 3.

Hypotheses 1: Identity of perpetrator and identity strength effects on altruistic preferences

A logistic regression was used to examine the relationship between (1) perpetrator identity (ingroup or outgroup) and (2) identity strength and altruistic preferences (to compensate or punish). In contrast to our hypothesis, results show that there was no significant effect of perpetrator identity (male or female) on female participants' preferences for altruistic compensation or punishment ($OR = .928, p = .388$). The interaction term Experimental Condition * Empathy was not significant, suggesting no moderation effect of perpetrator identity on empathy and altruistic preferences. Further, in contrast to our hypothesis that identity strength would be associated with more punishment we found that participants with stronger identity strength were more likely to compensate the victim rather than punish the perpetrator ($OR = .520, p < .01$).

Hypotheses 2 and 3: Empathy and perceived injustice on altruistic preferences

A multinomial logistic regression (See Table 2) was conducted to model the association between the predictor variables (empathic concern, perspective-taking, perceived injustice, strength of ingroup identity) and participant altruistic choices (i.e. keep money for myself, compensate the victim or punish the perpetrator). By adding the predictors to the intercept-only model, the -2-log likelihood of the model reduced from 342.581 to 267.694, $\chi^2(12, n=116) = 74.886$, Nagelkerke $R^2 = .385, p < .001$. The goodness-of-fit test was not significant, $p = .694$, indicating a good fit of the model to the data (Field, 2009).

It was hypothesized that high empathy (particularly empathic concern) would be associated with compensation than punishment. For each unit of increase on the 5-point empathic concern scale, the odds ratio of choosing to punish rather than compensation was 1.211, meaning that the higher the participants score on empathic concern, the more likely they will choose to punish the perpetrator comparing to compensate the victim ($b = .191, \text{Wald } \chi^2(1) = 5.596, p = .018$). This is in contrast to our prediction. For each unit of increase in perspective taking, the

odds ratio of punishing the perpetrator vs. compensating the victim is .778 meaning that higher perspective taking scores are associated with higher likelihood of compensating the victim rather than punishing the perpetrator ($b = -.251$, Wald $\chi^2(1) = 8.127$, $p = .004$). This is in support of our hypothesis.

It was hypothesized that high perceived unfairness would be associated with punishment rather than compensation. The results suggest that, for a one-point increase in the perceived unfairness score, the odds ratio of participants to punishing the perpetrator than compensating the victim is .593, indicating that people with high level of perceived unfairness are more likely to choose compensation than punishment ($b = -.523$, Wald $\chi^2(1) = 21.277$, $p < .001$). Again, this was in contrast to predictions.

Discussion

The aim of the present research was to investigate the relationship between empathic concern, perspective taking, perceived injustice and altruistic preferences for punishment or compensation, as well as to examine the extent to which the identity of the perpetrator and the identity strength of the participant influence altruistic preferences. Results demonstrate that participants with higher empathic concern are more likely to punish the perpetrator than compensate the victim. This is in contrast to Leliveld et al. (2012) who found that individuals with high levels of empathic concern are more likely to compensate while people with low levels of empathic concern are more likely to punish. Empathising with the victim, however, does not necessarily lead to compensation. It is possible that those with higher empathic concern chose to punish the perpetrator because costly punishment is also deemed as one type of helping behaviour (Fehr & Fischbacher, 2003). Besides, dispositional empathic concern might not affect altruism to the same extent as situational empathic concern. It could be that distributive inequality from the third-party economic game is not

salient enough to elicit participants' empathic emotions (compassion, sympathy) towards the victim, which are significant antecedents of altruistic compensation (Weng et al., 2015).

Instead, one might default to punish the perpetrator to reduce aversive feelings towards unfairness or inequality, regardless of the effect of trait empathic concern.

Results also found that participants with lower empathic concern were more likely to compensate, than punish, the victim. [One possible explanation may be that females generally show higher empathetic emotions when observing unfair treatments, compared to males](#) (Vander Graaff et al., 2014; Decety & Yoder, 2015). Therefore, even if compensation is associated with high empathic concern scores (in mixed-gender samples), it could be associated with lower scores on empathic concern in this sample due to a generally higher level of empathic concern overall.

As hypothesised, results demonstrate that higher trait perspective-taking is associated with compensating the victim more so than punishing the perpetrator. Our results add to the inconsistent literature that adopting another person's view is a significant predictor of altruism (Goldstein, Vezich, & Shapiro, 2014; Tusche et al., 2016). The findings presented here are the first, to our knowledge, to evidence that perspective-taking affects preferences for altruistic punishment and compensation in the dictator game. [This finding, together with the finding that higher empathic concern is associated with more punishment, is consistent with Galinsky et al., \(2008\) who argue that empathic concern and perspective-taking are associated with decision-making in a differential way. By definition, empathic concern and perspective-taking are respectively referred to as affective and cognitive aspects of empathy. In this light, Galinsky and colleagues \(2008\) posit that when making a decision by which another individual's welfare might be influenced, empathizers tend to connect with others emotionally, whereas perspective-takers are able to understand another individual's thoughts and motives before making an emotional connection. We argue that the perpetrator's behaviour in our dictator](#)

game may have been seen as justifiable by those who score high on perspective-taking (e.g., blaming the experimenter), luring them to concentrate more on the experiences of the victim and ultimately leading them to compensate the victim more so than punish the perpetrator. An alternative explanation is that the observed preference for compensating the victim amongst high perspective-takers could have been triggered by the ingroup membership of the victim. It is worth noting at this point that whilst we did not observe a direct effect of perpetrator identity on altruistic preferences nor we examine identification with the victim but we did find that participants stronger in gender identity were more likely to choose to compensate the victim. Therefore, our findings seem to align with research which has found that the likelihood of taking another person's perspective increases particularly when the person in need is an ingroup member (Tusche et al., 2016). And, that ingroup members are thought to be more readily comforted by another ingroup member (Guala & Filippin, 2016). Adopting the perspective of the ingroup member victim with the perception of need therefore potentially arouses the feeling to compensate by laying more stresses on making the victim "intact" again (Liu, Li, Zheng & Guo, 2017).

In contract to predictions, there was no effect of perpetrator identity (male v female) on preferences for altruistic compensation or punishment. This finding is surprising given that compensatory behaviours are associated with perceived relatedness towards the victim (Lotz et al., 2011). One possible explanation is that gender social identity was not salient enough in this study. Yet, we observed that stronger ingroup identity was associated with altruistic compensation rather than altruistic punishment. This implies that identity does influence behaviours but that the identity of the observer is perhaps more salient than the identity of the perpetrator. An alternative explanation is that the potential effect of the perpetrator's identity is superseded by a stronger intention to increase the ingroup victim's welfare amongst higher identifiers. This is because an individual with a strong ingroup identity must identify the

property of the group and anticipate other members' behaviours, which requires a certain level of perspective-taking (Liu et al., 2018), as argued in the previous paragraph. It may be that perspective-taking mediates the effect of ingroup identity on compensation by reasoning the perpetrator's unfair behaviours meanwhile concentrating on the ingroup victim's situation. And possibly, this crowding-out effect leads participants to replace punishments with the intention to comfort the ingroup victim.

Justice is guided by the law of equality, morality and/or social norms, and often, individuals intuitively take actions to punish those who violate it (Fehr & Gächter, 2002; Fehr & Fischbacher, 2003; Tyler & Blader, 2003). However, it appears that human responses to injustice are not always punitive, as there is accumulating evidence showing that when offered an option of compensation, people are also intended to compensate the victim (Lotz et al., 2011; van Doorn, Zeelenberg & Breugelmans, 2018). It was, therefore, of our interest to test whether injustice perception affects altruistic preferences for compensation or punishment. And in support of this hypothesis, perceived injustice was found to predict the preference for more compensation over punishment. This is largely in line with previous studies that participant reactions to distributive inequality are compensatory (Rupp & Bell, 2010; O'Relly, Aquino & Skarlicki, 2016; van Doorn & Brouwers, 2018). One possible interpretation to this observation, particularly given the role of identity strength in this study, is that participants may have paid excessive attention to the victim even without being consciously aware of that. This assertion is supported by Gummerum et al., (2016) who found that participants were more willing to compensate the victim following an automatic experience of the victim's emotions from the victim's perspective. Van Doorn and Brouwers (2018) argued that participants select victim compensation on multiple accounts (e.g. gaining the victim's respect), and caring about an ingroup member was indeed included. Neuroimaging studies also demonstrated attentional bias for ingroup members when perceiving injustice (Liu et al., 2018). In addition, in the

dictator game the observer might attribute the unfair distributive outcome to the experimenter who designed the rules rather than to the perpetrator. These results together with our findings that people who perceived more unfairness tended to compensate the victim rather than punish the perpetrator, suggest that participants' attention is more captured by the welfare of the victim, especially when the victim resembles them socially (i.e. ingroup membership) (Lotz et al., 2011).

Limitations, implications and future directions

Whilst this research makes a number of valuable contributions to the literature, it is important to acknowledge the limitations. First, the experimental conditions were relatively subtle by using victim names (e.g. William vs Lilly) which might not have been salient enough to elicit participants' internal categorization of social or group identity based on gender. Future research should aim to more explicitly make participants aware of the identity of the perpetrator for example by using images. Second, by using an online survey it was not possible for the researchers to control for the environment in which the study took place. Future research should aim to replicate these findings in a laboratory setting where the environment can be better controlled. Third, to reduce participant burden we chose to use single-item measures for identity strength and fairness. Whilst previous research has found these items to match multi-item scales, future research may consider using multi-item scales to ensure that the reliability and validity of the measures is not compromised. Fourth, by explicitly instructing participants to report their perception of fairness and ingroup identity strength this might have resulted in participants acting in accordance with the experimenter's expectations when such mechanisms should operate subconsciously (Edele et al., 2013). Future research thus should aim to eliminate this experimental artefact by incorporating a unique, yet precise quantitative approach such as neuroimaging tools, facial expression recordings.

Despite these limitations, the findings of this research have some important implications for theory and practice. First, our work makes a theoretical contribution by examining the extent to which a range of predictors influence altruistic preferences. To our knowledge there is no previous research that has concurrently demonstrated the significant moderating role of empathy and perceived injustice on third-party's reactions to distributive inequality in the dictator style game, urging for a close look at the link between empathic emotions and fairness considerations on altruism. [Our preliminary findings](#) of the effects of identity strength also provide grounding work for bridging the gap between altruism literature and social identity theory. Second our finding that higher trait perspective-taking is associated with more compensatory acts while higher empathic concern is associated with more punishments emphasises the importance of promoting perspective-taking focused empathy in interventions which aim to promote intergroup relations.

Conclusion

Adding to the growing body of literature on altruism and empathy, we provide the first evidence that higher trait perspective taking, perceived injustice and identity strength are associated with the propensity to compensate the victim in the dictator game. These preliminary findings contribute empirical evidence to the notion that altruistic acts in distributive inequality are fundamentally compensatory, and support for future exploration of dissociating different categorizations of social identity that might affect altruistic acts. Whilst historical research on empathy-altruism hypothesis are mainly correlational, our research identifies the causal link behind by manipulating the identity of the perpetrator, the victim and the third-party observer. We conclude that in a context where the observer can resemble the victim, an observer with higher ability to adopt another person's perspective would prefer comforting acts over punishments. Higher empathic concern, however, leads to the preference for punishments than comforting. These allow future research to expand the scope of research on empathy-altruism

and consider the extent to which the sense of “us” is involved to alter human decision-making process. Additionally, to attenuate impulsive and aggressive behaviours induced by empathic emotions, we therefore highlight the importance of focusing on perspective-taking in empathy-training interventions that are designed for reducing intergroup conflicts.

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Tables

Table 1. Descriptive stats for all within-subject factors

Variables	Experiment condition					
	Male vs. Female (n=54)			Female vs. Female (n=61)		
	M±SD	Skewness	Kurtosis	M±SD	Skewness	Kurtosis
Age	27.32±9.56	1.99	2.01	27.59±7.96	1.88	2.22
Empathic concern	27.53±4.41	-.59	.264	27.13±4.96	-.64	.314
Perspective taking	26.27±4.46	-.35	-.20	26.25±4.31	-.42	-.31
Perceived fairness (-)	6.40±2.49	.76	-.40	6.30±2.23	.69	-.36
Money spent to help	16.59±15.29	.98	.39	15.29±13.22	.99	.39
Identity strength	4.26±1.17	-1.34	.77	4.01±1.28	-1.22	.83

Table 1 illustrates the distribution of this dataset. Samples in the two experiment conditions show a comparable age, empathy ability, perception of fairness and identity strength, making the dataset suitable for the subsequent between-subject analysis.

Table 2. Multinomial Logistic Regression used to predict altruistic preferences

Predictor	B	OR (95% CI)	SE
Punishment vs. Compensation			
Intercept	5.501*		
Experimental Conditions	-.075	.928	.564
Strength of ingroup identity	-.655**	.520	.204
Empathic Concern	.191*	1.211	.081
Perspective Taking	-.251**	.778	.088
Perceived fairness (-)	-.523***	.593	.113
ExperiCon*Empathy	-.247	.785	.061

Note: Controls are ethnicity and age (omitted from the table). OR= Odds Ratio. SE= Standard Error.

CI= Confidence Interval. * $p < .05$, ** $p < .01$, *** $p < .001$. (-) = reversed score

Table 3. Mean scores, standard deviations and correlations amongst empathy, perceived injustice, and strength of altruism (n=116)

	1	2	3	4	5
1. Age	-				
2. EC	.282**	-			
3. PT	.150*	.494**	-		
4. PI (-)	0.52	.243**	.089	-	
5. Money	.296**	.312**	.144*	.080	-
Mean	27.46	3.9011	3.7516	3.66	15.90
SD	8.720	0.67159	0.62436	2.344	14.200

Notes: EC=empathic concern; PT=perspective-taking; PI=perceived fairness (reversed); Money= the amount of money participants spent to punish or compensate; SD=Standard Deviations. ** $p < 0.01$. (2-tailed). * $p < 0.05$. (2-tailed).